

I CLAIM:

1. A multi-layered flooring composite for use over a subfloor layer, said composite including a top floor layer of substantially hard material and at least one acoustic layer positionable thereunder
5 between said top floor layer and said subfloor layer, said acoustic layer including a plurality of discrete beads of substantially elastic, resilient material wherein portions of adjacent beads abut one another and other portions of said adjacent beads
10 are spaced from each other to create spaces therebetween and wherein substantially all of said adjacent beads are integrally joined together at the abutting portions thereof.

2. The flooring composite of claim 1 wherein at least some of said beads have substantially truncated spherical shapes.

3. The flooring composite of claim 2 wherein substantially all of said beads have truncated spherical shapes with at least one substantially flat, horizontal surface.

4. The flooring composite of claim 3 wherein at least some of said at least one flat, substantially horizontal surfaces of said beads are substantially coplanar.

5. The flooring composite of claim 4 wherein said coplanar surfaces are positioned substantially adjacent said top floor layer.

6. The flooring composite of claim 4 wherein said coplanar surfaces are positioned in a

substantially abutting relationship with said top floor layer.

7. The flooring composite of claim 4 wherein said coplanar surfaces are positioned in an abutting relationship with said top floor layer.

8. The flooring composite of claim 7 wherein any moisture between said top floor layer and said acoustic layer can be received in said spaces between said other portions of said adjacent beads.

9. The flooring composite of claim 8 wherein said spaces between said other portions of said adjacent beads are in fluid communication with one another.

10. The flooring composite of claim 1 wherein at least some of said beads have substantially truncated spherical shapes with at least two substantially flat surfaces.

11. The flooring composite of claim 10 wherein said at least two substantially flat surfaces of said some beads are spaced from one another and substantially parallel to each other.

12. The flooring composite of claim 11 wherein said at least two substantially flat, parallel surfaces of said some beads are substantially coplanar with corresponding flat surfaces of each other.

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13. The flooring composite of claim 1 further including a substantially moisture-proof film layer positioned adjacent said acoustic layer.

14. The flooring composite of claim 1 further including a substantially moisture-proof film layer positioned below said acoustic layer between said acoustic layer and said subfloor layer.

15. The flooring composite of claim 14 wherein said film layer is integrally joined to at least some of said beads.

16. The flooring composite of claim 1 further including a substantially moisture-proof film layer positioned above said acoustic layer between said acoustic layer and said top floor layer.

17. The flooring composite of claim 1 wherein said beads are made of foam.

18. The flooring composite of claim 17 wherein said foam is a closed cell foam.

19. The flooring composite of claim 18 wherein said closed-cell foam is polyethylene.

20. The flooring composite of claim 18 wherein said closed-cell foam is polypropylene.

21. The flooring composite of claim 1 wherein the density of said acoustic layer is about two to ten pounds per cubic foot.

22. The flooring composite of claim 1 wherein said spaces between said other portions of said adjacent beads are in fluid communication with one another.

23. The flooring composite of claim 1 wherein said acoustic layer has a thickness and

5 substantially all of said beads have a substantially truncated spherical shape wherein the projected diameters of said substantially spherical shapes are greater than said acoustic layer thickness.

24. The flooring composite of claim 23 wherein said acoustic layer thickness is about 1/8 inch and said projected diameters are greater than 1/8 inch.

25. The flooring composite of claim 24 wherein said projected bead diameters are substantially the same.

26. The flooring composite of claim 25 wherein said projected bead diameters are about 1/4 inch.

27. The flooring composite of claim 1 wherein the beads of said acoustic layer are made of closed cell foam and are about 75%-95% air.

28. The flooring composite of claim 1 wherein the spaces between said other portions of said adjacent beads make up about 35% to 45% of the total volume of the acoustic layer.

5 29. The flooring composite of claim 1 wherein the beads of said acoustic layer are made of closed-cell foam and the total volume of the acoustic layer including the beads and the spaces between said other portions of said adjacent beads is about 75% to 95% air.

30. The flooring composite of claim 1 wherein said padding layer further includes a plurality of inelastic beads mixed with said elastic beads with portions of some of the elastic beads abutting

5 portions of adjacent inelastic beads and being integrally joined thereto.

31. A multi-layered flooring composite, said composite including an upper layer of substantially hard material and a lower layer of substantially hard material and at least one acoustic layer
5 positionable therebetween, said acoustic layer including a plurality of discrete beads wherein portions of adjacent beads abut one another and other portions of said adjacent beads are spaced from each other to create spaces therebetween.

32. The flooring composite of claim 31 wherein substantially all of said adjacent beads are integrally joined together at the abutting portions thereof.

33. The flooring composite of claim 31 wherein at least some of said beads are made of elastic, resilient material.

34. The flooring composite of claim 31 wherein at least some of said beads are made of inelastic material.

35. The flooring composite of claim 31 wherein said spaces between said other portions of said adjacent beads are in fluid communication with one another.

36. The flooring composite of claim 31 wherein at least some of said beads have substantially truncated spherical shapes.

37. The flooring composite of claim 31 wherein at least some of said beads have truncated spherical

5 shapes with at least one substantially flat,
horizontal surface wherein at least some of said
flat surfaces are coplanar.

38. The flooring composite of claim 32 wherein
said coplanar surfaces are positioned substantially
adjacent said upper layer.

39. The flooring composite of claim 31 further
including a substantially moisture-proof film layer
positioned adjacent said acoustic layer.

40. The flooring composite of claim 31 further
including non-woven fabric positioned atop said
acoustic layer between the acoustic layer and the
upper layer.

41. The flooring composite of claim 31 wherein
said beads are made of closed cell foam.

42. The flooring composite of claim 31 wherein
the beads of said acoustic layer are made of closed
cell foam and are about 75%-95% air.

43. The flooring composite of claim 31 wherein
the spaces between said other portions of said
adjacent beads make up about 35% to 45% of the total
volume of the acoustic layer.

5 44. The flooring composite of claim 31 wherein
the beads of said acoustic layer are made of closed-
cell foam and the total volume of the acoustic layer
including the beads and the spaces between said
other portions of said adjacent beads is about 75%
to 95% air.